

THE COLONIAL NEWSLETTER

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X-RATED COINS
A Mark of Madness

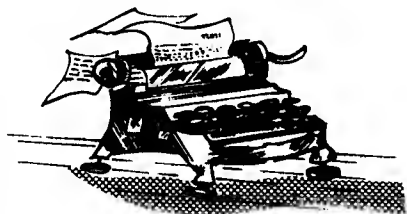
(RF-35)



In the early days of coin collecting in America there was a collector who did what would today be considered as unthinkable and sheer madness. In the clearest portion of the field of his rarest and most unusual specimens he would scribe, quite deeply, an X mark. We can only guess that the mark was for quick identification of a few choice specimens within a large group of coins. Three such marks are illustrated above on a Fugio 2-C, Fugio 101 and a Newcomb 14b of 1803. This mark of madness is also reported on a 1787 Mass. Cent with arrows transposed, several Connecticut coppers, and an Immune Columbia. Can any of our Patrons furnish addition information on the identity of this collector and his X-rated coins? Photo credits: Fugio 101, ANS; Fugio 2-C, CNL; 14b, Richard Picker.

IN THIS ISSUE

Editor's Notebook



Edward R. Barnsley presents another in his Connecticut Coppers series - The Bizarre Lettering of the Connecticut Coppers. In this paper Ned advances the thesis that the so-called blunders on the Connecticut dies are not careless mistakes but are actually the result of ingenious improvisation by the die cutters while working with inadequate tools. He includes a tabulation of 44 specific examples; we plan to present macro-photographs in a future issue of each of

these examples. This article raises obvious questions -- why were the tools inadequate, who did the work, where was it done ? Ned does not attempt to answer these questions at this time; however, significant progress is being made in the formulation of answers, and they will eventually yield to systematic research.

And an introduction to Abel Buell.

Attached is the final group of CNL DATABOOK pages of Chapter VI "Coin in America" from W.C. Prime's Coins, Medals and Seals. Most of our Patrons have indicated that they are in favor of receiving these reprints, but some of you have stated that they are of little value because of inaccuracies. There is no question whatsoever that much of the early numismatic writing is inaccurate (and so is the modern) but just what criteria determines accuracy or inaccuracy? We point out one example -- in the last issue of CNL we carried the report of the discovery of a 1723 & 1724 Hibernia Harp Left die trial (pages 345-347). Now turn to CNL DATABOOK page CMS-24, Plate XCII, which was included with the May 1971 issue and observe the second illustration from the left in group 4 -- a Hibernia Harp Left dated 1723 ! Was Prime accurate or inaccurate when he prepared this illustration ?

Now that all the pages in the Prime reprint have been distributed our Patrons may rearrange the pages in numerical sequence if they desire, and combine them into a single document. As originally published in Prime the plates were scattered at random throughout the text and the descriptive legends were carried separately on yet other pages. For the DATABOOK we have added the legends to each plate and grouped the pages in what we hope will be a considerably better sequence for reading and study.

ERRATA Sequential page 346, 4th line from bottom of page, please change to read:

(Vlack B.2n -- one of 8 or 9 reverse dies known for the year 1722).

ABEL BUELL ~ OUR AMERICAN GENIUS ~



PART I - INTRODUCTION

J.C.Spilman

This paper is the first in a series of articles covering the life and works of Abel Buell of Killingworth, Connecticut. Buell is the man credited with being the designer and coiner of the Fugio Cents of 1787 and many of the Connecticut coppers. Tradition holds that his sons Benjamin and William were also involved in this work as well as some of the Vermont issues, and possibly others. There can be little question that Abel Buell was the single most important figure of Colonial American numismatics, but his biographers have almost all neglected his numismatic activities. The most outstanding biographer of Abel Buell was Lawrence C. Wroth with his book Abel Buell of Connecticut -- Silversmith, Type Founder and Engraver (Wesleyan University Press, 1958, Library of Congress Catalog Card Number 58-13601). Wroth's book is required reading for anyone interested in an in-depth analysis of the activities of Abel Buell. His carefully documented research serves to verify much of the isolated and fragmented work of earlier writers, some conducted more than 100 years prior to Wroth.

In 1963 in a personal letter to one of our Patrons, Dr. Wroth wrote "Since my retirement I have been immersed in the research and writing of two large books and in the past few months have been faced by deadlines set by their publishers. It has been especially difficult to carry on this work because of the loss of one of my eyes and the diminution of the vision in the other..... Your information about Buell and the Connecticut coppers is invaluable. It made me wish very much that I had gone more thoroughly into that aspect of his activities. There were other omissions which have made me realize that my book may not be regarded as the last word in the Buell biography. It is, however, my last word" And so it was.

☆ Abel Buell was a native American born on February 1, 1742 in Killingworth, Connecticut; his life ended in the Alms House at New Haven on March 10, 1822 during his 81st year. The title "Our American Genius" was bestowed upon him in a letter written in 1769 by Mr. John Devotion of Saybrook to Dr. Ezra Stiles of Newport:

"Our American Genius, Abel Buell, is now manufacturing Types for printing. Dr. Gale thinks they will be equal to any European ones; the Dr. designs a present of enough of them to print an advertisement, to your American Society". (The American Philosophical Society of which both Drs. Stiles and Gale were members).

That Abel Buell was indeed worthy of the title is evidenced by the following summerization of his accomplishments:

- ★ A lifetime of work as silversmith, jeweller, armorer, lapidary, auctioneer, ship owner & showman.
- ★ Invention and construction of a practical lapidary's cutting and polishing machine.
- ★ Design and manufacture of the first American printing type.
- ★ Engraving of numerous charts and maps including the Yale University diploma, the Arms of the State of Connecticut, various navigation charts, the Great Wall Map of the United States, and others.
- ★ Construction and operation of one of the first cotton mills in America.
- ★ Invention of a corn planting machine and the construction of numerous mechanical devices, patterns and dies of importance to the industrial growth of America.
- ★ Design, manufacture and operation of a unique machine for coining copper money, and the design and manufacture of coinage dies.

It is this last accomplishment that especially interests us from a numismatic point of view. In the March 1970 issue of CNL we published in the Research Forum:

RF-33 Abel Buell's "High Speed Coinage Press".

Abel Buell of Connecticut, reportedly the die sinker of the Fugio Cent dies and some of the Connecticut dies, is credited by some writer with the invention of a coinage press capable of producing at a rate of as high as 200 coins per minute. Where is this reference -- by what author -- and is there any verification that such a device actually existed ?

We are indebted to Edward R. Barnsley for his research in digging up the following material from the obscure writings of John Warner Barber (1798 - 1885). The extract which follows was taken from pages 531 and 532 of CONNECTICUT HISTORICAL COLLECTIONS (New Haven, 1836) from what appears to be a supplement to a descriptive section on the town of Killingworth, Connecticut, of which Abel Buell "was a native". This work by Barber was published only fourteen years after the death of Buell. The source of Barber's data is revealed by Dr. Henry Bronson, M.D. in a footnote to his paper HISTORICAL ACCOUNT

of CONNECTICUT CURRENCY, page 181 - 3rd footnote, published in 1863 where he notes "Mr. Barber states that his information came from a Mr. William Storer, watch maker, who died in New Haven several years ago". It appears therefore that Mr. William Storer was a contemporary of Abel Buell, and we are tempted to trust the word of such an old timer.

Mr. Barber's account of the career of Abel Buell, as related by Mr. Storer is the following:

Abel Buell, an uncommonly ingenious mechanic, was a native of this town: he was apprenticed to Ebenezer Chittenden, a gold and silversmith in this place, previous to the Revolution. Buell was married at the age of nineteen years, and at the age of twenty, altered a five shilling colony note to five pounds. His neighbors had suspected that something was going on in his house which was wrong, as a light had been seen in his chamber, at unusual hours of the night. He was discovered by some person, who, mounting a ladder, looked in at the window, and saw him in the act of altering the bills. So ingeniously was it done, that it could only be discovered by comparing the stumps of the letters with those left in the book from which all the colony bills were issued.* Matthew Griswold, the king's attorney, afterwards governor, conducted the prosecution against Buell. As it was his first offense, and he otherwise sustained a good character, Mr. Griswold granted him every indulgence which he could consistently with his duty as a public officer. Buell's punishment appears to have consisted of imprisonment, cropping, and branding. The tip only of Buell's ear was cropped off: it was held on his tongue to keep it warm till it was put on the ear again, where it grew on. He was branded on the forehead as high up as possible. This was usually done by a hot iron held on the forehead of the criminal till he could say the words

"God save the king."

Mr. Buell was at first imprisoned at Norwich; afterwards, through the influence of his family and friends, he was removed back to Killingworth. About this time he constructed a lapidary machine, the first, it is believed, that was used in this country. With this he was enabled to make a very curious ring; a large beautiful stone being set in the center, surrounded by those of a smaller size, all of which were wrought in a curious and workmanlike manner. This ring he presented to Mr. Griswold, the king's attorney, and through his influence a pardon was obtained. Afterwards, about the year 1770, Mr. Buell removed to New Haven. About this period, Bernard Romans was constructing a map of North America. As the coast of Pensacola was but little known, Buell was employed by him to make a survey of the coast. While at Pensacola, a person, knowing him to be an ingenious man, enquired if he could break the governor's seal, and open a letter and seal it up again, so that it could not be discovered that the letter had been opened. Mr. Buell was able to show his employer that it could be done in a perfect manner. He was, however, arrested for making the attempt, although it is believed that the governor employed the person who came to Buell. He was confined to the island, but he soon found means to escape, by a boat of his construction: he was accompanied by a boy who wished to leave the place; they put out into the open sea, and were three days out of sight of land. They however were able to get into some of our southern ports, and from thence Buell returned home.

The map mentioned above was published during the Revolutionary war, and it is believed to be the first map engraved and published in this country. In engraving it, Mr. Buell was assisted by Mr. Amos Doolittle, of New Haven. During the revolution it was extremely difficult to procure types for printing, except French types. Mr. Buell, turning his attention to this subject, soon constructed a type foundry, and employed 15 or 20 boys in making types. The building used for the foundry was the Sandemanian meeting house, situated in Gregson street. The legislature of the state, impressed with a sense of the service he rendered the public, restored to him his civil rights. Upon the conclusion of the Revolutionary war, Mr. Buell and some others were employed by the state in coining coppers. Mr. Buell constructed all the apparatus for this purpose, and to such perfection did he bring it, that he was able to coin 120 coins in a minute. Soon after, he went to England, for the ostensible purpose of procuring copper for coining, but in reality to gain some knowledge of the machinery used for the manufacturing of cloths of various kinds.

While in England, he was passing through a town where they were constructing an iron bridge; through some error or defect in the construction, the builders could not make their bridge answer any useful purpose. Such was Mr. Buell's knowledge and ingenuity on subjects of this nature, that he was able in a short time to direct them how to construct their bridge in a proper manner. So highly were his services considered, that he was presented with a hundred guineas. Mr. Buell returned to this country, and brought a Scotchman by the name of M'Intosh. They erected a cotton factory in Westville, in New Haven, one of the first erected in this country. He afterwards removed to Hartford, and from thence to Stockbridge, Mass. where he made a profession of religion after he was seventy years of age. About the year 1825 he returned to New Haven where he died in the alms house soon after his return.

* It appears from this that all the bills which were issued by the colony were originally bound together in the form of a book, and were cut out as they were wanted, leaving some part of the printed matter in the book.

So here we have in the words of a contemporary that Abel Buell constructed all the apparatus for the purpose of coining and brought it to a state of perfection such that he was able to coin 120 coins in a minute. In this paper are several interesting sidelights that differ somewhat from the carefully documented findings, more that 100 years later, of Dr. Wroth. We will only mention these briefly at this time but will cover them in detail in a later issue. First is the fact that the Buell cotton mill at Westville is mentioned in the context that Buell brought the Scotsman M'Intosh with him from Europe and THEY erected the cotton mill. Wroth reports that Dr. Ezra Stiles and Professor Meigs rode out to view Buell's cotton manufactory; Stiles says that Buell's will succede, but predicts that McIntosh's will fail. Now Crosby** says that the Hon. Henry Meigs "late of New York (before 1873) was alive in 1854 when he, Meigs, made a statement to Charles I. Bushnell about the physical location of the New Haven mint. If both these persons named Meigs were the same individual, then this man knew all about Buell's operation and could not possibly have been misinformed as one Mr. F. Kingsbury ("Crosby,"** page 211) said he was! But as we said, that is another story which we will discuss in a later article in this series.

So now we must ask ourselves the question -- could an ordinary screw press of the sort in common usage in Europe and Colonial America have been modified in any manner that might permit a production rate of 120 coins per minute? We believe that at best, screw presses might produce 45 coins per minute, or even 60 for a short period of time. In England Boulton and Watt managed a production rate from their 10 horsepower steam presses of 60 coins per minute at the Royal Mint. Speeds of 120 coins per minute were not achieved until the invention of the Uhlhorn press in the year 1839.

What then was Buell's press that might have produced 120 coins per minute? The only clue so far appearing in the numismatic literature is in "Crosby" (page 302) where quoting Charles I. Bushnell on the subject of the Fugio Cents, states: "The dies were made by Abel Buell, of New Haven, and the coins were struck by means of a drop press". It is clearly evident that Buell's high speed press was an unusual device. We shall defer further discussion of this press until a later article in this series when we will discuss the evidence presented by the coins themselves. Our major purpose in this present article being simply the introduction of the talents of Abel Buell to our Patrons.

This short introduction to Abel Buell and the work of his major biographer, Lawrence C. Wroth, is at best a cryptic survey of Buell's many accomplishments. His genius has been well documented by Wroth, but the writer is of the opinion that Wroth did not fully appreciate the human side of Abel Buell and as a result missed many implications of the business relationships of Buell with other people -- an aspect that repeatedly appears as a "source of bewilderment" throughout his biography. In so doing Wroth may have failed to develop what could prove to be the greatest numismatic mystery story of American history.

** Sylvester S. Crosby; The Early Coins of America; and the Laws Governing Their Issue. & etc. Boston: Published by the Author, 1875

THE BIZARRE LETTERING OF *CONNECTICUT COPPERS*

EDWARD R. BARNLEY

A superficial study of Connecticut Coppers shows their legends to have been composed from a multiplicity of different kinds of letters, both as to size and style; a more detailed study reveals that many of their irregular letters are not the result of blundered dies, as generally considered, but rather they are the consequence of ingenious improvisation due to lack of proper punches. Only rarely was overpunching used to correct a mispunched character. This was done in only two overdates: Reverse "Q" which has 1787 struck over 1877, and reverse "R" which has 1787 struck over 1788.

It is hoped that a thorough classification of these varied letter punches and date numerals will lead to a grouping together of dies made with the same punches, or "stamps" or "irons" as they were called contemporaneously. Thus their individual characteristics may be used like fingerprints, so to speak, to identify or at least classify the sundry artisans who legally or clandestinely cut the many dies for this interesting series of Early American coins.

Connecticut legends do not always have their letters of uniform size. When a particular punch from one set of letters became unavailable for further use, the die sinker took the corresponding punch from another set, although by so doing it resulted in letters of varying height. An example of this may be seen in the legend of obverse 15.1 of 1788, where all the letters are large and of uniform size, except for the pair of "N's" which belong to a set of smaller letters.

The second of these "N's" is either double cut or struck over an "A".

It is a curious thing, but "N" seems to have caused more legend errors than any other letter. Reverses Z.21 and Z.22 of 1787 contain beautiful examples of an "N" cut over the letter "D". Double cutting of "N's" with noticeable offsetting may be seen on other 1787 dies, such as obverses 33.3 and 33.16 and reverse "D", as well as on the 1788 obverse 15.1. The letter "I" is also double cut occasionally. Examples of this occur on the 1787 obverse 33.19 and reverse Z.24. The first "E" of reverse T.2 of 1787 was sunk correctly, but the second "E" of the legend was accidentally double cut. (See Illustration No.3).

In addition to unconformity in letter size, legends oftentimes contain letters of different design, contrary to the conservative tradition of numismatic art. An example of this is the combination 6.4-K of 1785. Here AUCTORI has both a swash "A" and a "T", while ET has the same characteristic "T", thus indicating both dies were produced by the same tools, probably by the same artisan.

In "A" the inside clefting of the left foot continues in a sweeping curve until it almost touches the short, stumpy fork of the right foot. In "T" the left end of the cross bar drops down to make a graceful loop tangent to the upright bar. The bases of most of the other letters in these two dies are deeply clefted like the "A" is, but the left basal cleft of the "T" is folded over sideways, indicating an imperfection in the punch itself.

It is a matter of conjecture whether these letters with their ornamental curves belong to a separate set so embellished, or whether they belong to the other less decorative letters on these two dies. In any event, all these clefted, both with and without flourishes, show that the skilled craftsmen who created them had more artistic ability than their contemporaries responsible for the otherwise drab looking legends of most Connecticut coppers.

Since there was a considerable variety of type faces used in letter press printing of the period, one would expect variation in the styles of letter punches used to sink Connecticut legends. But such is not the case. Once in awhile certain dies reveal that different sets of punches got mixed up, inadvertently or intentionally, with the result that two different letter styles appear on the same legend. Rarer still were letter punches with grooved faces. The 1787 combination 9-R is apparently unique in this respect. The letters "B", "D", "E", "I", "L", "R" and "T", (and perhaps the others too), were impressed by punches carved with a narrow line on each side of the wide vertical bars so that the three parallel strokes produce a very unusual and beautiful letter. Note that this design was cut into the punch, not engraved into the die. It is apparently the only one of its kind in the entire series. Reverse "R" is also unique in that it is the only Connecticut die to bear the abbreviation IND for INDE. There is no apparent reason for shortening this word because the ample space following it is filled with three crosslets. There is a total of seventeen of these crosslets used in this die which is in itself a record for ornamentation repetition.

In many dies, all of the letters are basal clefted, such as in both the obverse and reverse of combination 18-g.1 of 1787, with the exception, as always, of the round letters: "C", "O" and "U". (See Illustration No. 1). Sometimes though, a clefted letter is used only as an ornamental initial to brighten an otherwise standard type legend. For example, in obverse 3.2 of 1788 the first letter of AUCTORI has such a pronounced recurving of the feet of the "A" that the clefts resemble a pair of handle bar moustaches. (See Illustration No. 2). The remaining twelve letters of the legend are uniformly unclefted.

An extreme example of improvised legend lettering is found in reverse "P" of 1787 where eight of the nine letters are made by a Roman "I" punch. Three letters are conventionally made: the two "I's" and the "N" which is punched very lightly to only a fraction of the depth to which the other eight letters are sunk. The bizarre "D", two "E's", "T", "L" and "B" are composed of one or more miscellaneous punches added to the basic "I" punch which makes the upright bar of each respective letter. The right side of the "D" is made by a parenthesis shaped punch which does not touch the serifs of the basic "I" stroke. The two "E's" are made by adding horizontal bars to the basic "I" stroke. The top of the "T" and the base of the "L" are likewise formed in the same manner. Conformation of the "B", however, is quite eccentric. To the right of the basic "I" stroke, the curve of the upper lobe is made by a disconnected half-moon punch, while the bottom lobe is suggested by a semicircular dot far to the right of where it should be. All in all, the amazing improvisations of this reverse die are a striking illustration of typical Yankee ingenuity at its very best.

The "B" punch seems to have been one which was frequently unavailable when needed for cutting LIB into reverse dies, because an "R" punch was so often substituted for it, - usually without making further adjustment. Conversely, the "R" punch itself was not available in at least two instances when the AUCTOBI obverses 39.1 and 39.2 were being made. In other words, sometimes the die cutter had no "B" punch, at other times he had no "R" punch; so he did the best he could!

Several different shaped "R" punches were used to make Connecticut dies. Design of the right leg varied considerably from a short, stubby drop, as in reverse hh.2, to a long graceful recurvature, as in obverse 37.6. Like practically all bizarre lettering of Connecticut coppers, these apparent misspellings occurred only in the 1787's. Examples of the LIR vs LIB anomaly may be best seen in the "cc's", "ff's", "gg's" and "hh's".

Occasionally as in reverse e of 1787, the bottom half of the "R" was enclosed by an extension of the lower right serif. In this case, it was done with a long, curving sweep which touched the right leg of the "R" at the half way point rather than at its foot, thus forming a wierd looking bottom lobe for a "B". In most such improvisations, however, the "R" was altered to a "B" in a more artistic manner by carefully closing in the bottom with a horizontal bar merged into the foot of the right leg of the "R".

The letter "I" punch is the key which proves that clefting in the Connecticut series is seldom, if ever, caused by metal flow, an hypothesis which has heretofore been accepted as factual for all series of so called Colonial coins. The forked bases of the vertical strokes of Connecticut letters were generally made by punches which had been intentionally nicked in the proper places with triangular files.

The letter "I" punch was nicked on one end only, its base. If the punch were positioned upside down, the letter would then appear, of course, with a clefted top and a square base. Examples of such carelessness may be seen in reverses T.2, W.1 and KK of 1787 where all the letters are basal clefted except the "L" which is made up of an inverted "I" with a foot added to its lower right serif. Consequently, the only top clefted letter in the entire legend is the flat based "L" adjacent to the basal clefted "I" correctly oriented. (See Illustration Nos. 3 & 4).

It is interesting to note that the inverted "I" in reverse KK cited above was converted into an "L" in a most peculiar fashion by the addition of a diagonally positioned rhombohedral punch which bears only the slightest resemblance to the horizontal foot of the "L" it is supposed to represent. (See Illustration No. 5).

In most composite "L's" of Connecticut legends, the vertical bar is made by the "I" punch held in correct position so that the heel of the altered "L" will show clefting. In reverse D of 1787 the foot of the "L" is made by two distinct punches: a short line, then a triangle. (See Illustration No. 6). The other two letters of LIB are made from the same clefted "I", both bases down, as in the "D" of INDE and the "E" of ET. However, the vertical bars of the "D" and the "E" are not clefted. This may indicate that two different "I" punches were used to cut this particular die.

Unclefted "I's" were likewise used as the basis for making two-part "L's". In reverse BB of 1787 the foot is made from a right angle having a horizontal base the same length as its turned up end. In reverse O of 1787 the foot is made from an isosceles triangle in similar fashion to the rhombus which completes the "L" in reverse KK previously mentioned. (See Illustrations Nos. 7 & 5).

Legend letters are not the only features improvised on Connecticut dies. Sometimes the year date was made without the use of number punches, as exemplified by those two remarkable 1788 reverses, A.1 and A.2, where the numerals are most ingeniously contrived entirely out of letter punches. It is interesting to note that A.1 is paired with an obverse having a mailed bust facing left, while A.2 is paired with two obverses both having draped busts facing left.

Numeral "1" of the date is made by a Roman letter "I" punch. This letter has two thin serifs on its left side, the upper one being slightly forked. Only a vestigial serif adorns the upper right corner. The lower right corner of the letter is slightly beveled as if a serif had been broken off at this point.

Numeral "7" of the date is made by an upside-down letter "L" punch, - the bottom of the numeral being clefted and serified. The top of the numeral has a forked serif at what was the heel of the letter. The top of the "7" curves gradually downward to terminate in a sharp point which looks like an enlarged serif. The horizontal bar of the "L" becomes, therefore, the cross bar of the "7" which is slightly arched upwards.

The two numeral "8's" of the date are made by a letter "S" punch, but the first one is turned upside down. After both letters had been sunk, their open loops were connected by burin to simulate the numeral "8". However, these hand engraved lines varied in their angularity, so the second "8" differs in final appearance from the first "8" after adjustment for its inversion. It is interesting to observe also that the "8" in the date on reverse D of 1787 seems to have been made by two strikes of a small letter "o", slightly overlapped like connecting links of a chain. So here is another remarkable example of Necessity being the Mother of Invention.

Another maverick letter not required in Connecticut legends is "P", which appears there nevertheless, erroneously, in two different sizes. The question immediately arises as to what letter punches such as "P" and "S" were doing in the tool box of a mechanic processing Connecticut dies. Were they used for making foundry type, an occupation in which Abel Buell excelled, or were they there for manufacturing some other series of coinage dies like the New Jersey coppers which called for these letters in their legends?

In reverse Z.1 of 1787, the last letter of LIB is made out of a "P" by the addition of a crude bottom line angled upward to join the top lobe so that the altered character looks like a badly mangled "B" with a bottom lobe only half the size of the top lobe. A second blunder occurred in this die when the last letter of INDE was sunk over an inverted "N". There are two cases where the letter "D" was inverted when punched into the reverse die and never overpunched to correct the mistake such as was done in reverse Z.1. In the two unique examples, 2.3-T and 2.4-U of 1786, the "D" of INDE appears upside down. Since both of these pieces share the British shield and very crude workmanship, it is concluded that all four dies were made by the same mechanic.

A large letter "P" appears on the four AUCTOPI dies. In obverses 40, 41 and 42 of 1787 no attempt was made to alter them to look like the letter "B". However, in the legend of obverse 7 of 1788, which used the same letter punches as the three preceding dies, a feeble attempt was made to correct the error. This latter "P" received the addition of a tiny, disconnected dash which shows up, unfortunately, in only extremely well struck specimens, but even so, this stroke is far from converting the letter to look like an "R". It would appear, then, that when a die sinker did not have the proper punch at hand, he used without compunction the one most nearly resembling it.

If the presence of letters "P" and "S" on Connecticut legends is inexplicable, the frequent appearance of "F's" can be reconciled by the fact that this is the first letter of Fugio, a closely affiliated series through the Atlee-Buell connection. Possibly the most improvised of all Connecticut letters is "E" altered more or less from this basic Fugio "F". The necessary change is easily accomplished by the addition of a short, horizontal bar and serif at the base of the "F", but the alteration was by no means always accomplished that simply. (See Illustration No. 5).

Many members of the obverse 33 family of 1787 use the Fugio "F" in CONNEC in place of the "E". In a few cases, the letter is unaltered, as in 33.37 where absolutely no attempt was made to make it look like the proper letter. Two other obverses which similarly retain unaltered Fugio "F's" are 43.1 and 43.2 of 1787.

A perfunctory attempt at improvisation was made in obverse 33.3 by adding a small dot adjacent to but not quite touching the lower serif of the "F". Likewise in 33.19 nothing has actually been added to the "F" however, there is a strong vertical line midway between this letter and the "C" which may indicate a gesture on the part of the die sinker to correct his misspelling.

In most of the obverse 33's attempts were made, some good and some bad, to alter the conspicuous letter "F" to make it look more like an "E". In 33.33 the alteration was most casually executed when a serif intended for the bottom of the "F" was struck so high on the middle bar as to hang there on its end in a most ridiculous position. In the majority of cases, however, more respectable looking "E's" resulted from careful extensions of the bases of these Fugio "F's". In 33.6 and 33.12 this extended bottom bar looks like a club. In 33.1 and 33.2 it looks like a horizontal triangle longer than the top bar. In 33.20 and 33.27 it looks like a vertical triangle the same length as the top bar.

Because there are two "E's" on every reverse but only one on an obverse, the altered "F" is more apparent on the reverses. Here they occur with great frequency, such as in all the six "W's", some sixteen of the "Z's" and in many other reverses too numerous to mention. It should be noted that both Fugio "F's" on some of these dies do not always show the same technique of alteration, indicating that each change was done individually in the die. For example, in reverse W.4 of 1787 the first "E" was improvised by adding to the lower right serif of the "F" a very small heart shaped dot, while the second "E" was improvised in a different manner by adding to the base of the "F" a horizontal bar equal in length to its top bar.

Some sixteen of the improvisations of the "E" in INDE, taken from the Z family of 1787 reverses, may be seen illustrated on a plate in The Colonial Newsletter, Serial Number 15, Page 10.

Reverse aa of 1787 is an exceptional die in that it has not only its two "E's" altered from "F's", but also an unaltered "F" is used in place of the "I" in INDE. This is one of the few cases in the Connecticut series of a truly blundered die, for the "I" punch was certainly available at the time because the word LIB was spelled correctly.

It has been stated repeatedly that this aa legend should be recorded as INDE over FUDE because "The engraver absentmindedly thought he was working on a Fugio die and started FU of FUGIO. The error was discovered, and the correction made by overpunching". This would be a better story if the second letter were

actually overpunched; but it isn't. An uncirculated specimen of 32.5-aa shows there is no undertype beneath the "N", although it is of unusual shape because an enormous serif closes over the top of the letter. In other words, the legend of this reverse die should be listed simply: FNDE ET LIB.

Another example of a wrong letter in the right place may be found in the 1788 obverses 13 and 17 where the second word of both legends reads CONNLC. There is no doubt that the die sinker intended to convert the "L" into an "E" by the simple expediency of adding two horizontal bars. However the alteration didn't get done, hence this anomalous curiosity remains to bemuse collectors of numismatic oddments. The clean cut INDL legend of reverse S of 1787 illustrates again another die with an "L" which was never converted into an "E".

The four 1787 ET IIB reverses ii, kk.1, kk.2 and LL are further examples of hurry-up die cutting where the basic "I" stroke was never finished into an "L" as was done in so very many other cases. Obverse 38 of 1787 is still another incompleated die which falls into the same catagory. Here the AUCIORI legend was obviously intended to have its first "I" altered into a "T", but evidently the press of production prevented the change from being made.

It is thus seen that the various spelling errors described above are not typographical bloopers, but rather they are the creations of necessity. It is evident that the die sinkers of these coppers had to use whatever punches were made available to them. They did not fashion new ones to replace those broken or lost, probably because they lacked either the technical skill or the time necessary to handcraft new ones.

After reviewing so many abnormalities of punch sunk letters, one must not conclude that all Connecticut coppers were produced from dies fashioned in this manner. Without a doubt some legends were entirely hand carved into the dies. Good examples of this category are the obverse 5's of 1786.

All but one of the thirteen members of this family have coarse, hand carved letters with irregularly clefted bases and grossly exaggerated serifs. Strong differences between the two adjacent "N's" in the twelve similar dies is one criterion alone to demonstrate that these letters were handcrafted. Reverse O.2 which is paired with obverse 5.2, 5.7 and 5.8 has exactly the same kind of letters, so all these dies must have been hand engraved by the same artisan. (See Illustration No. 8).

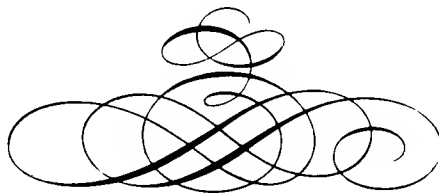
Obverse 5.3 is the odd ball in this particular family. It is entirely different from the other members, being sunk with a unique effigy punch called Hercules Head. It has uniform, unclefted letters which were obviously punch sunk without subsequent modification, yet this die has to be typed together with other obverse 5's because it is a mailed bust facing left, with two colons in the legend.

Although no specific information has been recorded about the techniques and tools used by the unknown manufacturers of Connecticut dies, any shred of information is a significant step toward the ultimate goal of discovering how and why so many different varieties of coppers were made from them. One of the chief unknown factors is the riddle of the wierd looking, hybrid letters which frequently interrupt the monotonous legends of these pieces.

On the basis of the so-called Trivial Minutia presented above, the writer has made three conclusions concerning these problems.

- ★ First: legend letters and date numerals were, with very few exceptions, sunk into the die with alphameric punches, rather than engraved into it by hand. This does not preclude the probability that all or parts of certain dies may have been duplicated by a hubbing process.
- ★ Secondly: the ornamental clefting of legend letters was primarily inherent in the design of the punch itself rather than being the result of mysterious metal flow during the coinage process. Clefted letter punches were the rule, not the exception, while clefted date punches simply did not exist.
- ★ Thirdly: dies with misspelled legends should be considered as having unfinished letters rather than blundered letters, bizarre as some of them appear.

Grateful acknowledgement is made to Alfred D. Hoch who supplied the accompanying photographs of coins in the writer's collection. Likewise, all observations in this article have been cited entirely from specimens in the writer's collection.



CATAGORIES OF BIZARRE LETTERS

LETTERS or NUMERALS	PAGE	REFERENCE EXAMPLE
IMPROVISED LETTERS		
"L" from unclefted "I"	359	1787 reverse 88; O
"L" from clefted "I", base down	359	1787 reverse D
"L" from clefted "I", base up	359	1787 reverse T.2; W.1; KK
"E" from "F"	361	1787 obverse 33.3; 33.19; 33.33; 33.6; 33.12
	361	1787 obverse 33.1; 33.2; 33.20; 33.27
	361	1787 reverse W.4; a a
"8" from "P"	360	1787 reverse Z.1
	360	1787 obverse 40; 41; 42
	360	1788 obverse 7
"8" from "R"	358	1787 reverse e
LETTERS INTENDED TO BE IMPROVISED		
"L" not altered to "E"	362	1788 obverse 13; 17
	362	1787 reverse S
"I" not altered to "L"	362	1787 reverse ii; kk.1; kk.2; LL
	362	1787 obverse 38
"F" not altered to "E"	361	1787 obverse 33.37; 43.1; 43.2
"F" not altered to "I"	361	1787 reverse a a
LETTERS USED IN SUBSTITUTION		
"8" instead of "R"	358	1787 obverse 39.1; 39.2
"R" instead of "8"	358	1787 reverses cc's; ff's; gg's; hh's
MISCUT NUMBERS OVERCUT		
78 struck over 87	356	1787 reverse Q
7 struck over 8	356	1787 reverse R
MISCUT LETTERS OVERCUT		
"N" struck over "D"	355	1787 reverse Z.21; Z.22
"E" struck over inverted "N"	360	1787 reverse Z.1
LETTERS DOUBLECUT		
"I"	356	1787 obverse 33.19
	356	1787 reverse Z.24
"E"	356	1787 reverse T.2
"N"	356	1787 obverse 33.3; 33.16
	356	1787 reverse D
	356	1788 obverse 15.1
LETTERS CUT UPSIDE DOWN		
"D"	360	1786 reverse T; U
LETTERS WITH VERTICAL ORNAMENTATION		
"E"; "R"	357	1787 obverse 9
"8"; "D"; "I"; "L"; "T"	357	1787 reverse R
DIFFERENT SIZE LETTERS IN SAME LEGEND		
Two "N's"	356	1788 obverse 15.1
DIFFERENT STYLE LETTERS IN SAME LEGEND		
Swash "A"; "T"	357	1785 obverse 6.4
Swash "T"	357	1785 reverse K
LETTERS OF DIFFERENT DESIGN		
"R" short leg	358	1787 reverse hh.2
"R" long leg	358	1787 obverse 37.6
ALL LEGEND LETTERS BASAL CLEFTED		
	357	1787 obverse 18
	357	1787 reverse g.1
INITIAL LETTER ONLY BASAL CLEFTED		
	357	1788 obverse 3.2
LEGEND LETTERS ENTIRELY HAND CUT		
	362	1786 all obverse 5's except 5.3
	362	1786 reverse O.2
LEGEND LETTERS MADE FROM "I" PUNCH		
	358	1787 reverse P
DATES MADE FROM LETTERS		
	359	1788 reverse A.1; A.2
	360	1787 reverse D

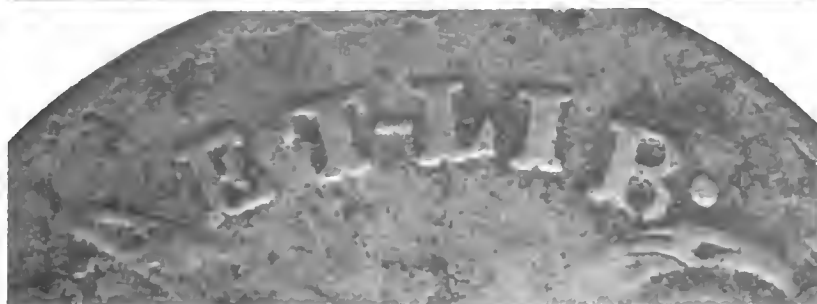


Illustration No. 1
INDE ET LIB from Rev. g.1 of 1787



Illustration No. 2
AUCTORI from Obv. 3.2 of 1788



Illustration No. 3
ET LIB from Rev. T.2 of 1787



Illustration No. 4
INDE ET LIB from Rev. W.1 of 1787



Illustration No. 5
INDE ET LIB from Rev. KK of 1787

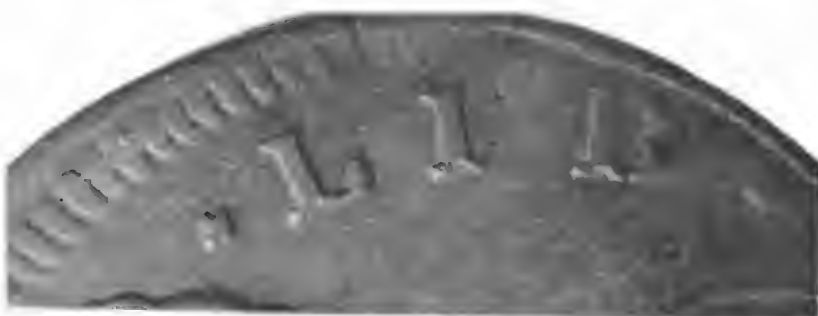


Illustration No. 6
LIB from Rev. D of 1787



Illustration No. 7
ET LIB from Rev. 0 of 1787

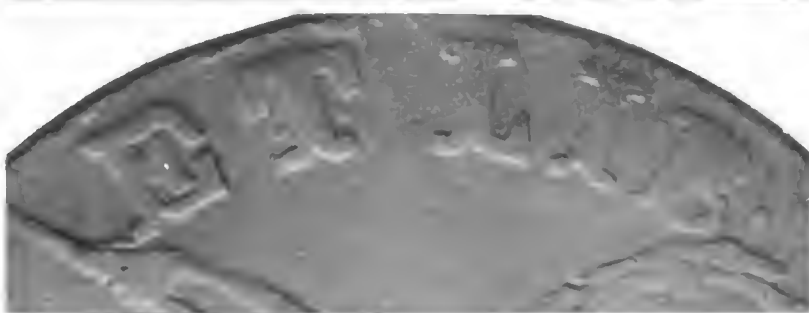
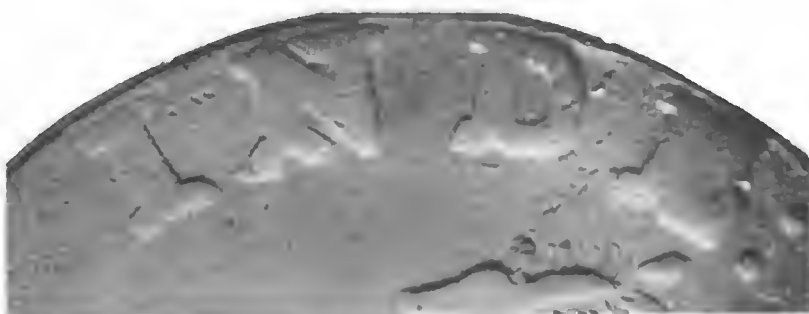


Illustration No. 8
1NDE ET LIB from Rev. 0.2 of 1786